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ABSTRACT

Age, specific emotion, and linguistic modality (verbal vs. non-verbal) were predicted to affect knowledge of emotion in young preschoolers (N = 45, mean age = 40.7 mos). Prosocial response to emotion and knowledge of emotion were also predicted to be related, given naturalistic observation and the use of contextually valid emotion knowledge measures. Results indicated that older subjects scored higher on the puppet measure of understanding of emotions elicited by different situations, as well as on ability to verbally label the emotions happy, sad, and angry. Non-verbal labeling of emotion scores was higher than that of verbal scores; these non-verbal scores actually showed a ceiling effect at later age ranges. Knowledge of situations eliciting happy emotion was greater than that for anger or fear. For a subset of the above subjects (N = 21), knowledge of situations eliciting happy emotions predicted prosocial reactions to positive emotion, whereas overall knowledge of both positive and negative emotions predicted prosocial reaction to negative emotion during free play. These results substantially replicated previous findings on knowledge of emotions, but with a younger sample. Further, the linkage between knowledge of emotion and prosocial behavior stand as partial confirmation of several theories of empathy. (Author)

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AFFECTIVE UNDERSTANDING IN YOUNG PRESCHOOLERS AND REACTIONS TO PEERS' EMOTIONS

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Abstract

Age, specific emotion, and linguistic modality (verbal vs. non-verbal) were predicted to affect knowledge of emotion in young preschoolers (N = 45, mean age = 40.7 mos). Prosocial response to emotion and knowledge of emotion were also predicted to be related, given naturalistic observation and the use of contextually valid emotion knowledge measures. Results indicated that older subjects scored higher on the puppet measure of understanding of emotions elicited by different situations, as well as on ability to verbally label the emotions happy, sad, and angry. Non-verbal labeling of emotion scores were higher than verbal scores; these non-verbal scores actually showed a ceiling effect at later age ranges. Knowledge of situations eliciting happy emotion was greater than that for anger or fear. For a subset of the above subjects (N= 21), knowledge of situations eliciting happy emotions predicted prosocial reactions to positive emotion, whereas overall knowledge of both positive and negative emotions predicted prosocial reaction to negative emotion during free play. These results substantially replicated previous findings on knowledge of emotions, but with a younger sample. Further, the linkage between knowledge of emotion and prosocial behavior stand as partial confirmation of several theories of empathy.

Recent investigations have shown that young preschoolers use emotions language accurately (Bretherton et al, 1981; Ridgeway & Russell, 1985), know which emotions are emitted in certain social situations (Borke, 1971), and can react to such emotions in a sophisticated prosocial manner (Zahn-Waxler & Radke-Yarrow, 1982). Given these previous findings, the aims of this study are: (1) to specify the effects of age, specific emotion, and linguistic modality (i.e., verbal or non-verbal) on the demonstration of early knowledge of emotions; and (2) to examine the relation between the nascent abilities of emotion knowledge and prosocial reactions to emotions.

It was predicted that: (1) older subjects, even in the restricted age range between 2 1/2 and 4 1/2 years, would demonstrate greater proficiency than younger subjects in both labeling emotions and specifying emotions likely to be elicited in certain situations; (2) happy emotion would be more easily identified than the negative emotions, sad, angry, and afraid; (3) the verbal mode of emotion labeling would be more difficult than a non-verbal mode for this age range; and (4) knowledge of happy emotion would be related to naturalistically observed prosocial reaction to happy emotional displays, whereas knowledge of negative emotions would be related to prosocial reaction to negative emotional displays.

Method

Subjects were 45 2 1/2 to 4 1/2 year-olds (mean age, 40.6 mos). Three sets of measures were used: (1) ability to non-verbally and verbally label prototypical pictorial representations of happy, sad, angry, and afraid emotions; (2) ability to pick the emotion (again, non-verbally) which would be elicited by certain situations, such as having a nightmare, going to the zoo, etc. These situations were presented via puppetry, and

subjects simply picked the face depicting the emotion they decided was appropriate in each situation; and (3) naturalistic assessments of reactions to emotional displays (happy, sad, angry, and hurt) during free play with peers.

Results and Discussion

Table 1 shows results for the emotion labeling measure. Clearly, there was a main effect of both modality and specific emotion for this ability, and a significant emotion X modality interaction. Labeling the afraid face was more difficult to do verbally than non-verbally (i.e., responding to "show me the face that is afraid" was quite a bit easier than responding to the question "How does this person feel?" for the afraid face). A simple main effects analysis for within-subject designs showed that within both the expressive and receptive (i.e., verbal and non-verbal) modalities, there was an effect of emotion. It is also evident from Table 1 that mainly verbal labeling increased with age; non-verbal, receptive labeling was an earlier acquired skill and did not show an effect of age. Children made many errors when trying to verbally label the negative emotions, tending to mix up the negative emotions or reply "I don't know" or "(this face) feels bad."

For emotion labeling, happy emotions tended to be identified more accurately than anger, whereas happy emtions were definitely easier for the children to identify than afraid emotion; sad expression was also more accurately identified than the afraid expression, and the angry face was more correctly lableing verbally than the afraid face.

Table 2 shows results for the emotion situation measure. There was a significant effect of emotion, as shown in the table. Each of the specific emotions tested were also affected by age of subject. Planned comparisons showed that happy situations were correctly identified more often than angry or fearful situations, wereas sad situations were also identified more ac curately than angry or fearful situation. Error

analyses showed that sadness tended to be confused with anger (and sometimes happiness) in these situations, whereas both angry and fearful situations were fairly often mis-identified as sad.

Lastly, for a subset (N = 21) of the total subject sample, understanding of positive emotion (i.e., the labeling measure) was significantly related to prosocial reactions to positive emotion in the classroom, such as matching happiness, reinforcing happiness, etc. (r = .60, p =.01). Knowledge of emotion-eliciting situations, for both positive and negative emotions, was related to prosocial responses to distress emotions in the classroom, such as comforting, helping, etc. (r = .55, p .03).

The predictions made above were thus substantially upheld. For example, happy expressions and situations were identified most accurately. These results replicated earlier findings with an older sample. The lack of difference between comprehension of happy and sad emotions also replicates findings with an older sample; it appears that by a fairly young age children comprehend and are able to use the happy/sad dichotomy in describing and interpreting emotion. Given these very young children's proficiency at understanding happiness, the relative lack of study of positive affective states and reactions to positive affective states is unfortunate. It is also important to realize young children's confusions surrounding negative emotions (see error analyses) for applied reasons, such as dealing with divorce and separation.

These results also show linkage between social cognitive understanding of emotion and reaction to emotion in a naturalistic setting, for both positive and negative emotions. Children respond prosocially to those emotions which they perceive accurately. Apparently knowledge of both positive and negative emotions is necessary to make the distinctions necessary in reacting prosocially to distress. These finding should be extended to larger samples.

Table 1

Summary of Results for Emotion Labeling Measure

	Mean	S.D.	Age F (3, 41)	Most Common Errors	Modality F (1, 44)	Emotion F (3, 132)	Modality X Emotion F (3, 132)
EMOTION							
Expressive					17.24***	18.07***	13.62***
Happy	1.64	0.74	10.42***	None			
Sad	1.62	0.72	2.21+	Bad, Don't Know, Other			
Angry	1.47	0.76	2.83*	Bad, Afraid, Don't Know			
Afraid	.76	0.77	1.72	Sad, Angry, Bad, Don't Know			
Receptive							
Happy	1.73	0.69	1.76	None			
Sad	1.60	0.65	0.76	Angry, Afraid			
Angry	1.56	0.66	2.55+	Sad, Afraid, Bad			
Afraid	1.44	0.69	0.81	Sad, Angry, Bad			

PLANNED COMPARISONS (within-subjects F, df = 1, 43)

	Expressive	Receptive		Modality
Happy vs. Sad	0.21	1.66	Happy	1.15
Happy vs. Angry	4.02*	3.37+	Sad	0.09
Happy vs. Afraid	45.42***	8.59**	Angry	1.62
Sad vs. Angry	2.67+	0.21	Afraid	17.40***
Sad vs. Afraid	47.67***	4.60*		
Angry vs Afraid	30.12***	1.09		

Simple Main Effects Analysis: $F_{expressive} = 27.21^{***}$

$F_{receptive} = 17.53^{***}$

+ $p \leq .10$ * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

Summary of Results for Emotion Situation Measure

	Mean	S.D.	Age F (3, 40)	Most Common Errors	Emotion F (3, 129)
EMOTION					7.30 ***
Happy	3.34	1.28	2.77 *	None	
Sad	2.93	1.62	3.20 *	Angry, Happy	
Angry	2.61	1.50	4.58 **	Sad	
Afraid	2.43	1.57	3.16 *	Sad	

PLANNED COMPARISONS (within-subjects F, df= 1, 42)

Happy vs. Sad	1.71
Happy vs. Angry	11.81 **
Happy vs Afraid	14.80 ***
Sad vs. Angry	2.54 *
Sad vs. Afraid	7.31 **
Angry vs. Afraid	1.00

* $p < .05$. ** $p < .01$. *** $p < .001$.